

Claims

[c1] An endshield assembly for an electric motor, said endshield assembly comprising:
an endshield comprising a body, an inner face, and an outer face;
at least one anchor extending radially outward from said inner face, said anchor comprising an end, a head, and an expandable shank extending therebetween, said shank comprising a wall and a bore, said bore extending between said end and said head, said wall defining said bore and extending convergently from said head to said end; and
a fastener configured to expand said anchor wall to secure said endshield to the motor.

[c2] An endshield assembly in accordance with Claim 1 wherein said anchor further comprises an outer surface comprising a plurality of teeth configured to engage the motor to secure said endshield to the motor.

[c3] An endshield assembly in accordance with Claim 1 wherein said shank bore comprises a first width at said shank head and a second width at said shank end, said first width wider than said second width.

[c4] An endshield assembly in accordance with Claim 3 wherein said fastener comprises a head having a width, said fastener head width wider than said shank bore first width.

[c5] An endshield assembly in accordance with Claim 4 wherein said fastener comprises a plurality of threads, said shank bore comprises a plurality of threads, said fastener threads configured to engage said shank bore threads.

[c6] An endshield assembly in accordance with Claim 1 wherein said anchor is fabricated from ductile metal.

[c7] An endshield assembly in accordance with Claim 1 wherein said anchor is fabricated from plastic.

[c8] An electric motor assembly comprising:
a motor housing;
a stator comprising a stack of laminations, a first and second ends, and a bore

therethrough, said stator mounted in said motor housing;
a rotor core rotatably mounted in said motor housing and extending through said
stator bore;
a rotor shaft extending through said rotor core; and
at least one endshield assembly, each endshield assembly comprising an endshield
comprising a body, an inner face facing said stack, and an outer face;
at least one anchor extending from said endshield inner face towards said stack,
said anchor comprising an end, a head, and an expandable shank extending
therebetween, said shank comprising a wall and a bore, said bore extending
between said end and said head, said wall defining said bore and extending
convergently from said head to said leading end; and
a fastener configured to expand said anchor wall to secure said endshield to the
motor.

[c9] An electric motor assembly in accordance with Claim 8 wherein said anchor further comprises an outer surface comprising a plurality of teeth configured to engage said motor to secure said endshield to said motor.

[c10] An electric motor assembly in accordance with Claim 8 wherein said shank bore comprises a first width at said shank head and a second width at said shank end, said first width wider than said second width.

[c11] An electric motor assembly in accordance with Claim 10 wherein said fastener comprises a head having a width, said fastener head width wider than said shank bore first width.

[c12] An electric motor assembly in accordance with Claim 11 wherein said fastener and said shank bore are threaded, said fastener configured to couple to said shank bore.

[c13] An electric motor assembly in accordance with Claim 8 wherein said stack comprises at least one borehole extending therein, said stack borehole positioned in alignment with said anchor and configured to receive said anchor such that said anchor engages said stack within said borehole to secure said endshield to the motor when said fastener engages said anchor wall.

- [c14] An electric motor assembly in accordance with Claim 8 wherein said anchor is fabricated from ductile metal.
- [c15] An electric motor assembly in accordance with Claim 8 wherein said anchor is fabricated from plastic.
- [c16] A method of securing an endshield assembly to an electric motor, said method comprising:
 - providing an endshield assembly including an endshield having a body, an inner face, an outer face, and at least one anchor extending radially outward from the inner face, the anchor including an end, a head, and an expandable shank extending therebetween, the shank having a wall and a bore, the bore extending between the end and the head, the wall defining the bore and extending convergently from the head to the end;
 - positioning the endshield assembly in contact with the motor; and
 - inserting a fastener into the shank bore, the fastener configured to expand the anchor wall to secure the endshield to the motor.
- [c17] A method in accordance with Claim 16 wherein providing an endshield assembly further comprises providing an endshield assembly including the anchor having an outer surface having a plurality of teeth configured to engage the motor to secure the endshield to the motor.
- [c18] A method in accordance with Claim 16 wherein providing an endshield assembly further comprises providing an endshield assembly including a shank bore having a first width at the shank head and a second width at the shank end, the first width wider than the second width.
- [c19] A method in accordance with Claim 18 wherein providing an endshield assembly further comprises providing an endshield assembly including a fastener having a head with a width, the fastener head width wider than the shank bore first width.
- [c20] A method in accordance with Claim 19 wherein providing an endshield assembly further comprises providing an endshield assembly including the fastener having a plurality of threads, the shank bore having a plurality of threads, the fastener threads configured to engage the shank bore threads.

[c21] A method in accordance with Claim 16 wherein positioning the endshield assembly comprises:
providing a stack of laminations forming a stator on the electric motor, the stator having at least one borehole extending into the stack, the borehole configured to receive the anchor; and
inserting the anchor into the stack borehole such that the anchor engages the stack within the borehole and secures the endshield to the motor.

[c22] A method in accordance with Claim 16 wherein providing an endshield assembly further comprises providing an endshield assembly including an anchor fabricated from ductile metal.

[c23] A method in accordance with Claim 16 wherein providing an endshield assembly further comprises providing an endshield assembly including an anchor fabricated from plastic.